



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,734	01/30/2004	Won-Kyu Paik	2557-000217/US	9897
30593	7590	07/06/2007	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195			LUGO, DAVID B	
		ART UNIT	PAPER NUMBER	
		2611		
		MAIL DATE	DELIVERY MODE	
		07/06/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/767,734	PAIK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	David B. Lugo	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 30 January 2004.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-34 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 16-18, 21 and 23 is/are allowed.  
 6) Claim(s) 24, 28, 30, 32 and 34 is/are rejected.  
 7) Claim(s) 1-15, 19, 20, 22, 25-27, 29, 31 and 33 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 30 January 2004 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/14/05</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1-15, 19, 20, 22, 25, 26, 28, 29 and 31 are objected to because of the following informalities:

- a. Claim 1, line 25, “level the third control” should be --level of the third control--.
- b. Claim 14, line 3, “the second data” should be --the second data signal--.
- c. Claim 19 recites the limitation “the fourth control signal” in line 7. There is insufficient antecedent basis for this limitation in the claim.
- d. Claim 20 should depend from claim 19 instead of claim 18 in order to provide proper antecedent basis for “the counting unit” recited in line 1.
- e. Claim 22, lines 2-3, “the second data” should be --the second data signal--.
- f. Claim 25, line 6, “filter selects” should be --filter that selects--.
- g. Claim 26 should depend from claim 25 instead of claim 24 in order to provide proper antecedent basis for “the correlation values” recited in lines 3-4.
- h. Claim 26, line 4, “from correlation filter” should be --from the correlation filter--.
- i. Claim 28, line 2, “first data signal” should be --the first data signal--.
- j. Claim 31, line 4, “is selected” should be deleted.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2611

3. Claim 34 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 34 is drawn to a VSB sync signal detection circuit. However, the circuit is not recited as including any components. Accordingly, it is unclear what the metes and bounds of the claimed circuit are, thus rendering the claim indefinite

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 24, 28, 30, 32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gu U.S. Patent 6,507,578 in view of Kim U.S. Patent Application Publication 2002/0024995.

Regarding claim 24, Gu discloses a VSB sync signal detection circuit in Figure 3 comprising means (723-1) for generating a first control signal (S9) based on a received input data signal, means (723-3) for generating a position signal (S8) containing information regarding positions of a next field sync (Vsync) and segment sync signals (Hsync) (see col. 11, lines 3-7, 52-58), a correlator (721, 722, 723-2) for generating a sign signal (S12) to determine a sign of the field sync signal (col. 11, lines 41-45), and a generator (signal sync generator 724) for generating a plurality of distinct types of sync signals based on the control signal (S9), position signal (S8) and sign signal.(S12).

Gu does not expressly show that the first control signal is generated based on receipt of a selected one of an input first data signal and input second data signal. Kim discloses a VSB system in Figure 3 having a switching unit 400 for providing one of a first data signal Xa and a second data signal Xb to a sync signal generator circuit 500. It would have been obvious to one of ordinary skill in the art to use a switching unit as disclosed by Kim in the VSB sync signal detection circuit of Gu to provide a filtered signal via a NTSC rejection filter or an unfiltered signal to the sync generator circuit as desired.

Regarding claim 28, Kim discloses the selection of the first or second data signal based on a control signal from controller 800, where the control signal is considered a data selection signal.

Regarding claim 30, Gu discloses a method for generating one or more VSB sync signals comprising generating a first control signal (S9) based on a received input data signal, determining a position signal (S8) containing information regarding positions of a next field sync (Vsync) and segment sync signals (Hsync) (see col. 11, lines 3-7, 52-58), generating a sign signal (S12) to determine a sign of the field sync signal (col. 11, lines 41-45), and generating a plurality of distinct types of sync signals based on the control signal (S9), position signal (S8) and sign signal.(S12) via a generator (signal sync generator 724) as shown in Figure 3.

Gu does not expressly show that the first control signal is generated based on receipt of a selected one of an input first data signal and input second data signal. Kim discloses a VSB system in Figure 3 having a switching unit 400 for providing one of a first data signal Xa and a second data signal Xb to a sync signal generator circuit 500. It would have been obvious to one of ordinary skill in the art to use a switching unit as disclosed by Kim in the VSB sync signal

detection circuit of Gu to provide a filtered signal via a NTSC rejection filter or an unfiltered signal to the sync generator circuit as desired.

Regarding claim 32, Kim discloses the selection of the first or second data signal based on a control signal from controller 800, where the control signal is considered a data selection signal.

Regarding claim 34, Gu in combination with Kim teach a VSB sync detection circuit for generating a VSB sync signal in accordance with the method of claim 30.

***Allowable Subject Matter***

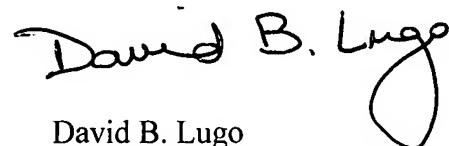
6. Claims 16-18, 21 and 23 are allowed.
7. Claims 1-15, 19, 20 and 22 would be allowable if rewritten or amended to overcome the objections set forth in this Office action.
8. Claims 25-27, 29, 31 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and amended to overcome the objections set forth in this Office action.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David B. Lugo whose telephone number is 571-272-3043. The examiner can normally be reached on M-F; 9:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



David B. Lugo  
Patent Examiner

7/3/07